



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|-------------------------|------------------------|
| 10/557,822 | 11/23/2005 | Pekka Vallittu | TUR-173 | 6060 |
| 32954 | 7590 | 11/28/2007 | | |
| JAMES C. LYDON 100 DAINGERFIELD ROAD SUITE 100 ALEXANDRIA, VA 22314 | | | EXAMINER MAI, HAO D | |
| | | | ART UNIT 3732 | PAPER NUMBER |
| | | | MAIL DATE 11/28/2007 | DELIVERY MODE PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|-------------------------------|---------------------------------|--|
| Office Action Summary | Application No. 10/557,822 | Applicant(s) VALLITTU ET AL. | |
| | Examiner Hao D. Mai | Art Unit 3732 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 16-19 is/are pending in the application.
 4a) Of the above claim(s) 16-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 November 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Newly submitted claims 16-19 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: claims 16-19 are drawn to a dental method, classified in 433/215; whereas the invention originally claimed is drawn to a dental matrix band classified in 433/39. The invention of the new claims 16-19 drawn to a dental method and the originally claimed invention of a dental matrix band are related to as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, the method can be practiced by another materially different apparatus such as a non-bonding stainless steel band that is to be removed after the completion of the dental restoration.
2. Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 16-19 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made

Art Unit: 3732

to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karmaker et al. (6186790 B1) in view Brattesani et al. (6234793 B1).

Karmaker discloses a preshaped component that is capable of taking the shape of a matrix band comprising fibers and a matrix, at least a portion of the matrix is partially uncured as it is partially or fully cured (column 1 lines 55-67). The matrix of the component is disclosed to be triethylene glycol dimethacrylate (column 3 lines 34-62). Karmaker also discloses the fibers to be in the form of continuous fibers (column 4 lines 50-67), and polyamide fibers (column 4 lines 39-47). Karmaker additionally discloses the matrix band to comprise particulate filler material of tin oxides, which is a metal oxide (column 4 lines 14-28). *See MPEP 2173.05(h) concerning Markush Groups*. However, Karmaker is silent to the thickness of matrix band and a restoration kit comprising the matrix band, a restorative dental composite, an adhesive, and an applicator device.

Brattesani et al. disclose that it is well known within the field of dentistry that such matrix bands can have a typical thickness of 0.05 mm (column 2, lines 1-11). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make Karmaker's preshaped component into a band with a thickness of 0.05 mm, which is within the claimed range of 0.05 mm to 1.5 mm, so that contact between the band, the tooth, and/or the restorative composite is optimized; such thin thickness of the matrix band also optimizes the polymerization of the restorative composite.

Art Unit: 3732

5. **Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karmaker et al. (6186790 B1) in view Brattesani et al. (6234793 B1), further in view of Garito et al. (4433960).**

Karmaker/Brattesani disclose substantially a matrix band as discussed above. However, Karmaker/Brattesani fail to disclose a restoration kit comprising the matrix band, a restorative dental composite, an adhesive, and an applicator device.

Garito et al. disclose a dental kit comprising dental strips, restorative dental composite, adhesives, and a hand-riveting tool as an applicator device (column 5 lines 23-35). It would have been obvious to one having ordinary skill in the art at the time the invention was made form a kit as evidenced by Garito with Karmaker/Brattesani's matrix band in order to achieve an efficient, convenient, and complete dental kit.

Response to Arguments

6. Applicant's arguments filed have been fully considered but they are not persuasive and are moot in view of new ground(s) of rejection. In response to applicant's argument with respect to Garito, please note that Garito has been used to show the kit, and not for changing the splint for the dental matrix band.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

Art Unit: 3732

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hao D. Mai whose telephone number is (571) 270-3002. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris Rodriguez can be reached on (571) 272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



HDM 11/26/2007



CRIS RODRIGUEZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700